

**MARK SCHEME for the October/November 2008 question paper**

**0418 INFORMATION TECHNOLOGY**

**0418/01**

Paper 1 (Written), maximum raw mark 120

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

- CIE will not enter into discussions or correspondence in connection with these mark schemes.

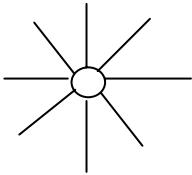
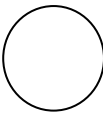
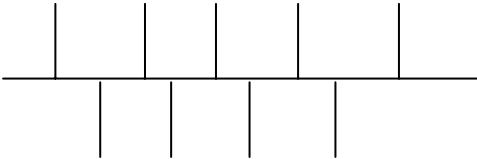
CIE is publishing the mark schemes for the October/November 2008 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



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<b>Question Number</b>	<b>Answer</b>	<b>Part mark</b>
<b>1</b>	A Desktop computer B Laser printer C Pin pad D Microphone E Laptop computer	[1] [1] [1] [1] [1]
<b>2</b>	CD ROM      DVD ROM      DVD R Floppy disc      Hard disc      Memory Stick	[1] [1]
<b>3</b>	F T T F T	[1] [1] [1] [1] [1]
<b>4</b>	<p>Dot Matrix printer → high quality high volume output</p> <p>Laser printer → high quality low volume output</p> <p>Inkjet printer → multimedia presentation</p> <p>Monitor → high quality very large printouts</p> <p>Graph plotter → continuous stationery</p>	[1] [1] [1] [1] [1]
<b>5 (a)</b>	Magnetic tape	[1]
<b>(b)</b>	Chip	[1]
<b>(c)</b>	DVD ROM	[1]
<b>(d)</b>	Bar code	[1]
<b>6</b>	<p>Right 90</p> <p>Forward 70</p> <p>Right 90</p> <p>-----</p> <p>Forward 60</p> <p>Penup</p> <p>Forward 80</p> <p>-----</p> <p>Pendown</p> <p>Forward 85</p> <p>Penup</p> <p>Right 90</p> <p>Forward 50</p> <p>-----</p> <p>Pendown</p> <p>Forward 20</p> <p>Right 90</p> <p>Forward 100</p> <p>-----</p> <p>↔ these two are interchangeable</p> <p><b>1 mark for each group of 3 statements</b></p>	[5]

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7	   <p>(a) (b) (c)</p>	<p>1 mark each</p> <p><b>[total 3]</b></p>
8	<p><b>Two</b> from:</p> <p>Faster to arrive/to be delivered</p> <p>Cheaper must be qualified (e.g. paying for a phone call is cheaper than buying a stamp/cheaper than paying transport costs)</p> <p>You don't have to leave your house to send e-mail.</p> <p>Email can be accessed/read from any location</p> <p>Replies to e-mails can be quicker.</p> <p>Easier (cheaper, quicker) <u>to send same message to many people</u></p>	<p><b>[2]</b></p>
9 (a)	<p>Interview shop assistants / customers / Hussain / OR face-to-face question session</p> <p>Can change script to suit circumstances / questions can be explained / repeated / interviewer can interpret body language</p> <p>Observing shop assistants / customers / Hussain / OR watching over the whole process</p> <p>Can gain broader overview of processes / saves workers' time / can gain a more accurate view of what is happening</p> <p>Examining documents used in current system</p> <p>Can follow data flow more easily / informs input / output format design</p> <p>Distributing questionnaires to shop assistants / customers / Hussain / OR using written questions to gather responses</p> <p>Better for busy people / don't have to prearrange appointments / more honest as they are anonymous / takes less time to get all the results (compared with e.g. interview)</p>	<p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>[1]</b></p>
(b)	<p>Title</p> <p>Author's name</p> <p>Reference / Accession number / ISBN / Bar code number / Publisher / Picture of cover / Dewey number / genre / category / fiction or non-fiction / target age group / picture of author / date published / place published / summary of contents / critique/ no. of copies / price / edition / number of pages / hardback or paperback / language</p> <p>Information fills the page AND is clearly a screen form</p> <p>Appropriate sizing for each field</p>	<p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>2 marks for 4 items, 1 mark for 3 items else 0</b></p> <p><b>[1]</b></p> <p><b>[1]</b></p> <p><b>[max. 5]</b></p>
(c)	<p><b>Three</b> from:</p> <p>Field name</p> <p>Field Type</p> <p>Field Length</p> <p>Key Field</p> <p>Validation Check</p> <p>Index</p> <p>Input mask</p>	<p><b>[3]</b></p>

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(d)	Normal data	[1]
	Data which is acceptable / within the given range / accept example	[1]
	Abnormal data	[1]
	Data of the wrong type / outside the given range / accept example	[1]
	Extreme data	[1]
	Data at either end of the range allowed / accept example	[1]
(e)	<p><b>Three</b> matched pairs from:</p> <p>Parallel running / implementation Have to pay two sets of workers / takes a long time before system is (fully) implemented/individual transactions take longer</p> <p>Direct changeover If unsuccessful lose all the data / no backup</p> <p>Pilot running If unsuccessful lose some data / takes a long time before system is (fully) implemented</p> <p>Phased implementation If unsuccessful lose some data / takes a long time before system is (fully) implemented</p>	[6]
(f)	<p><b>Three</b> from:</p> <p>The ease of use (of the solution) The appropriateness of the solution Compare the solution with the original task requirements / old system / design / objectives of system / users needs</p> <p>(Identify any) limitations (Identify any) improvements which can be made to the system Evaluating the users' responses (to the results of testing the system)</p>	[3]
(g)	<p><b>Three</b> from:</p> <p>RSI – wrists RSI – fingers Headaches Back problems / neck pain Sight problems / eye strain / dry eyes</p>	[3]
10	<p><b>Three</b> from:</p> <p>Are input devices Card inserted into card reader / chip reader Used with bank cards / credit cards Used at ATMs or EFTPOS systems PIN is typed in (using PIN PAD) Details on chip are read by chip reader PIN entered is compared with PIN on chip</p>	[3]
11	On-line	[1]
	Batch	[1]
	On-line	[1]
	Batch	[1]
12 (a)	E2	[1]
(b)	Any cell in range A1:A6 OR A1:E1	[1]
(c)	= C2-B2	[1]



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(d)	<p><b>Two from:</b></p> <p>(Computer readings are) <u>more</u> accurate / precise</p> <p>Readings can be taken <u>more</u> frequently.</p> <p>Readings can be taken any time of day or night / operates 24/7 / no breaks needed</p> <p>Can produce graphs <u>more</u> quickly</p> <p><u>More</u> reliable / readings taken at regular intervals / computers don't forget to take readings</p>	[2]
15 (a)	<p><b>Three from:</b></p> <p>Several people can take part in a conference regardless of where they are</p> <p>People are connected online / using internet</p> <p>Images of the members of conference appear on the screen</p> <p>Software is needed in each computer to operate the conference</p> <p>Codec is needed</p> <p>People who speak can be heard/seen by all the other people in the conference</p> <p>1 mark for relevant hardware (at least two items)</p>	[3]
(b)	<p><b>Two from:</b></p> <p>Do not have to pay for conference room / less expensive than hiring larger accommodation</p> <p>Time is not wasted in travelling to a venue</p> <p>Do not have to pay employee travelling expenses</p> <p>Do not have to pay for hotel rooms / overnight stays</p> <p>Conferences can be called at short notice</p> <p>Can ensure safety of employees</p>	[2]
16	<p>Technical</p> <p>Technical</p> <p>Technical</p> <p>User</p>	<p>[1]</p> <p>[1]</p> <p>[1]</p> <p>[1]</p>
17	<p><b>DTP three from:</b></p> <p>Advantages</p> <p>Disabled people / elderly people do not have to go to the library</p> <p>It can be printed in Braille</p> <p>You can read it at a time which suits you</p> <p>Disadvantages</p> <p>Need for physical distribution</p> <p>No sound</p> <p>No animation</p> <p>No video</p> <p>Printing costs/paper and ink <u>costs</u></p> <p><b>Presentation three from:</b></p> <p>Advantages</p> <p>Sound</p> <p>Animation</p> <p>Video</p> <p>Interactive / hyperlinks</p> <p>Disadvantages</p> <p>Library will need to have screen / computer / appropriate software</p> <p>Not everyone will visit the library / takes time to go to the library / costs money to travel to the library / may not get information to every household / may not be seen by everyone</p> <p>Must have at least one disadvantage and one advantage to get full marks</p> <p>There is a mark available for a reasoned conclusion</p>	[6]

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<b>18</b>	<p><b>Eight from:</b></p> <p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>Less danger of mugging</li> <li>Saves time rather than queuing</li> <li>Don't have to waste time travelling to shops / banks / theatres etc.</li> <li><u>Disabled</u> people don't have to travel / leave home</li> <li>Don't have to spend money on travelling expenses (travelling long distances to shops / banks / theatres)</li> <li>Greater choice of goods / seats</li> <li>Can shop when shops / bank are closed / can book tickets when theatres are closed / can shop / bank / book 24/7</li> <li>Less traffic pollution</li> </ul> <p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>Lack of socialising / social contacts</li> <li>Customers must have a computer / (basic) computer skills</li> <li>Hackers may intercept data / defraud customer</li> <li>Deprived of personal touch</li> <li>Phone bills can increase</li> <li>Without broadband other family members cannot use the phone</li> <li>Cannot see / feel goods in reality</li> <li>More vulnerable to phishing</li> <li>Lack of exercise</li> <li>May not get the exact goods they ordered</li> </ul> <p>A mark is available for a reasoned conclusion Max 5 from either advantages or disadvantages</p>	<b>[8]</b>
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